Useful Simple Trust

thomas.matthews communication design

expedition

usefulprojects

Useful studio

2022

Impact Report

Contents

Identity & purpose

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Working together since 1998

Our purpose

We are purpose-driven designers who trailblaze in the built environment. Our mission is BOLD. Our goal is industry transformation on carbon reduction, climate adaptation, resource reduction and social value creation.

"Our people are highly motivated and committed because our values mean that our combined success is shared equitably. We share part of our profit and re-invest the rest in research, social value, and environmental projects."

Why we're different

As a B Corp, Social Enterprise and employee-benefit organisation we do business differently – we deliver benefit for our clients, colleagues, communities and the planet. Our unique organisation means that clients benefit from our team's depth of experience as well as their rich understanding of wider practice in the built environment.

We are a close-knit family of collaborative and multidisciplinary creative thinkers, who can respond to specific challenges by fitting together the right team of experts to match the needs of both the project and the planet.

Our guiding ethos ensures that we exceed our clients' needs, champion our communities, care for our colleagues and pioneer through design for our planet.

Our journey

The Useful Simple Trust has always been a purpose-driven organisation that is committed to doing good in the built environment. Writing this impact report has given us an opportunity to reflect on where we are now and how we got here, before planning for, and embarking on, our next chapter. The timeline below sets out some of our most significant milestones, against the wider global context.

2006

— **B Corp founded**

2008

— **Useful Simple Trust established**

— **UK Climate Change Act**

Climate Change Act 2008

2015

— **First Beneficiary Trustee elected**

— **United Nations Sustainable Development Goals adopted**

2018

— **Recognised as a social enterprise and joined Social Enterprise UK**

2020

— **Trust companies are signatories of:**

- Structural Engineers Declare
- Civil Engineers Declare
- Building Services Engineers Declare
- Architects Declare

— **UK becomes first major economy to pass net zero emissions law**

— **Recognised as a B Corp**

— **Covid-19 pandemic**

2021

— **Launched our first Sustainability Strategy**

— **Build Back Greener**

2022

— **Founding signatories of Design Declares**

— **Joined the Science Based Targets initiative**

— **IPCC Warning**

IPCC 6th Impact Report warns that Climate Change is already impacting every corner of the world, and that much more severe impacts are in store if we don't act fast

We are on a journey to raise our game and B Corp is a big part of that.

Certified B Corporation

The Trust will aspire to blaze a trail towards an intelligent, integrated and ethical human environment, delivering useful and simple outcomes that are also beautiful and good.

B Corp: A force for good

Our governance and mission have always been geared toward a wider purpose, using our collective skills and passion to pioneer for good. The opening principle of the UST ethos states that "the Trust will aspire to blaze a trail towards an intelligent, integrated and ethical human environment, delivering useful and simple outcomes that are also beautiful and good."

Unlike organisations that manufacture products, we make stuff (buildings, bridges, cities, wayfinding, storytelling, policies, strategies) indirectly, through design, research, and influence. Measuring and scaling our impact is an important step for us and our current focus. Reducing carbon on a micro scale through lean design is then multiplied thousands of times in a building project to achieve huge benefits beyond the obvious. Less carbon often means less material, less weight, less cost, less time. By measuring and sharing the data, we hope that more organisations will come on board and continue to make an even greater difference.

But it's not just about carbon. Here is the beauty of B Corp. While thinking about less stuff, we also consider the community that can benefit and the environment we can regenerate.

The B Corp process and tools have enabled us to demonstrate our positive impacts at the organisational level, and channel our energy to do more in our project work. This mindset has been strengthened by the B Corp themes of governance, workers, community, environment and customers – all captured and tracked in the impact assessment. Aligning with the UN Sustainable Development Goals frames our wider purpose and gives us a common language. We are benefitting from using the B Corp SDG Action Manager to further self asses, benchmark and improve.

Joining the B Corp community has been a natural progression, building on our ethos and enabling us to join other like-minded and passionate businesses around the world. For us, being a B Corp is not about the badge; it is an opportunity and a challenge – to raise our game and continue to learn and improve.

We understand our responsibility as a business operating in the construction industry, a sector which has a poor track record regarding environmental and social impact. The ever-increasing challenges of social injustice, global uncertainty and catastrophic climate change require a purpose-driven focus to solve. Ultimately, B Corp is helping us achieve our wider purpose, which is about creating a better and more equitable built environment.

Our impact

We recognise that our greatest impact is through our project work, where we are able to influence and improve our built and natural environment. Our work doesn't always neatly translate into tonnes of carbon saved or numbers and charts. But impact is at the heart of everything we do and we are committed to getting better at measuring and reporting our achievements.

Here are some examples:

Bridgewater project

Bridgewater is a new neighbourhood on the edge of the Queen Elizabeth Park in Stratford, London. At least 50% of its 500+ new homes will be affordable, helping alleviate the local housing shortage. Bridgewater Triangle is one of the first masterplans to be submitted for planning that includes a whole-life carbon assessment at this stage. It is targeting low embodied carbon levels (560kg/m2).

3,000m²
new habitat gain

Net Zero Carbon Exhibit

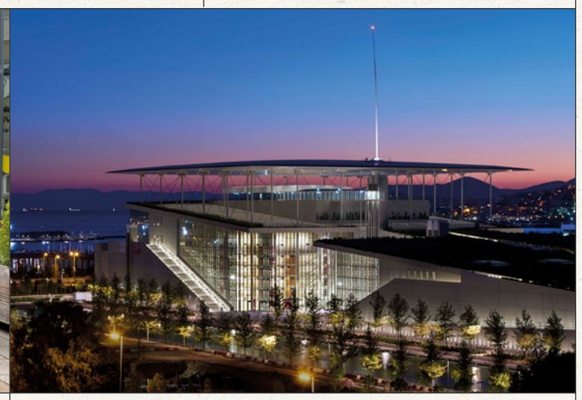
Every choice we make, every item we buy, eat, use or discard, has the potential to emit carbon. This installation for architects FCB Studios is designed to de-mystify the term and empower people to make simple everyday actions and reduce their emissions. The entire installation was created using offcuts and remnants from the FCB Studios model making workshop to ensure our own carbon emissions were managed.

100%
reused waste

Buckinghamshire New University

We are developing a green campus masterplan to support ecosystem restoration and deliver on the University's Nature Positive Pledge. Alongside the longer-term vision for nature recovery, we are designing the public realm. Our concourse installation comprises 100% reclaimed hardwood, fabricated by a fellow social enterprise in nearby Oxford.

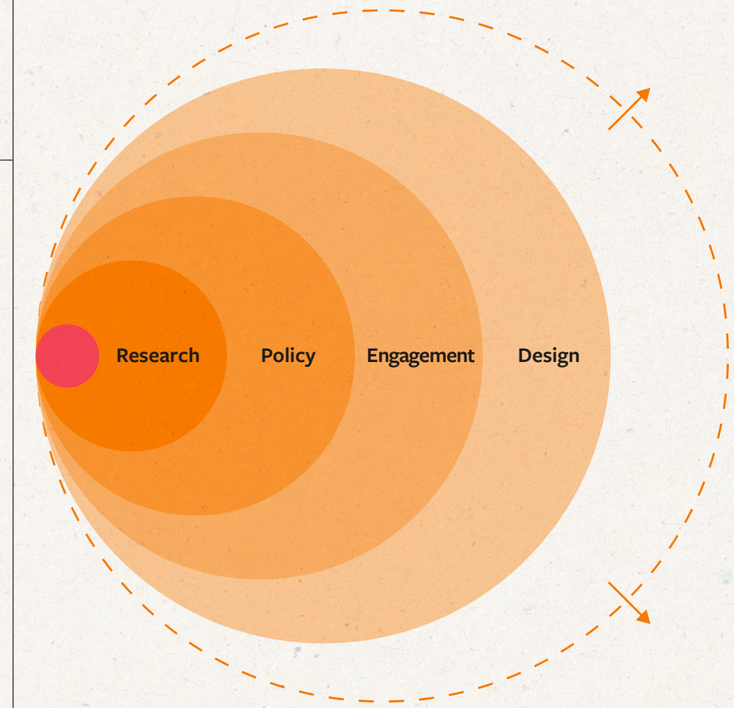
100%
salvaged timber



Stavros Niarchos Foundation Cultural Center

A new cultural destination at the heart of a new 17 hectare public park. Targeted innovation was critical to the success of this project. In particular the design and construction of the canopy, that supports 10,000m2 of photovoltaics, was "right at the edge" of structural engineering knowledge and industry capability.

1.5MW
power generated across 10,000m² of rooftop photovoltaic panels



Scopes 1 — 3

Our wider influence

As a responsible business, we have measured our carbon footprint and are taking steps to reduce our scope 1, 2 and 3 emissions to become a net zero organisation (see pg.26). However, we also know that our greatest impact is through our project work, which includes research, policy, engagement and design. We use our collective skills and expertise to create a healthier and more equitable built environment.

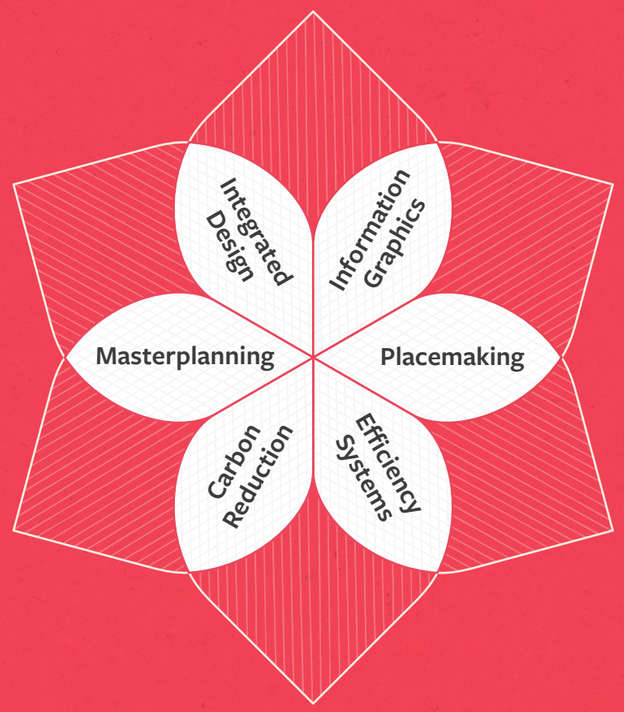
Our strands

Although we are often commissioned by clients as independent brands and for specific services, all the work we do is knitted together by the following four themes: Work for Good, More with Less, Restore and Adapt, and Get, Set, Zero. This means that, even when we work independently, we are targeting and measuring change together.

Construction Innovation
Expedition

Infrastructure & Masterplanning
Expedition

Communication Design
Thomas.Matthews



Sustainability Consultancy
Useful Projects

Architectural Design
Useful Studio

Structural Engineering
Expedition

WORK = FOR GOOD

Inequality is growing in the UK and globally, with manifest impacts on health, income and education. Our projects focus on providing affordable and inclusive places to live and work. We create places that are welcoming to all and easy to navigate. We work with organisations on creative approaches to generating true social value, where it's needed most. Through our outreach programmes, we are helping to create wider pathways into design and engineering.

GET / SET / ZERO

We are in a race to zero, with the journey being as important as the destination. Operational energy is important, but increasingly our focus is on the embodied impacts of places and infrastructure. Getting to zero requires both technological innovation and cultural change, drawing on a combination of design, engineering, consultancy, education and communication talents across the Trust.

MORE > WITH < LESS

The construction sector is both the biggest consumer of resources, and the most significant generator of waste, globally. In the UK, 20 million tonnes of construction materials are sent to landfill each year. Global geopolitical risks are pushing the cost of virgin materials to record highs. We delight in creating more value with less materials. For us this means designing out waste and inefficiency, as part of wider productivity improvements. We respect our existing buildings and components, looking for opportunities for reuse, and maintaining their highest value.

RESTORE + ADAPT

Significant biodiversity loss and climate change are the devastating cost of post-industrial human-centred development. Even with strong carbon mitigation scenarios, the most recent data shows that we are already experiencing climate change impacts. Our regenerative design approach seeks to restore habitats and ecological networks. We design new communities and infrastructure to be resilient in the face of high-emissions global warming scenarios.

Strand 1 /

WORK = FOR GOOD

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10,000+

students benefitting

100+

students every year

100+

experimental educational projects developed

Work for good

A long-standing ambition of the Trust has been to create a place for emerging start-ups to flourish by providing financial support, skills, and shared overheads. ThinkUp emerged as one of these, an innovative approach to education aligned with our mission to share. They describe their purpose below:

"We combine a deep understanding of the learning process with flair in the design and delivery of innovative educational activities and resources, to produce learning that is highly effective and delivers real long term benefits to the individual, organisation and society."

Working for good goes beyond impact through projects. The reach can be localised, while education, especially when via free online tools, has a global sphere of influence. Our efforts through Think Up and across the Useful Simple Trust have been significant. We deliver courses in design thinking into schools, universities and for peer groups in the industry. This work is a two way street where we share our experience and skills, and gain insight and challenge from our students.

"This work is a two way street where we share our experience and skills, and gain insight and challenge from our students."

It is clear that hands on learning has an important role to play, particularly as the world becomes more digitised and we see the impact of increased remote working and learning that was accelerated by the onset of the Covid-19 pandemic. Our founding Directors, Chris Wise and Ed McCann, pioneered the Constructionarium, a course for undergraduate civil engineers to have the opportunity to build large-scale mock-ups of famous engineering projects using real materials, processes and plant. This innovative approach has fundamentally changed the landscape of engineering education and enabled over 10,000 students to benefit and say 'I built that'.

Case study

Sheffield Hospital

We have been working with Artfelt, the Sheffield children's hospital charity, since 2015, to create designs that provide playful distractions for young patients. Our first project, the theatres ward, was inspired by Chinese tangrams. We developed graphic puzzles to help shift patient focus in the anxious moments before surgery.

Our concept uses tessellating tangram shapes, that break away to reveal animals, plants and buildings, for children to spot as they move through the hospital spaces. These decorative environmental graphics create a fun game that can be played by patients as they are escorted by nurses to their treatment. When we spoke to nurses at the hospital, they told us that playing games helps build good rapport between nursing staff and patients, which in turn provides comfort for children at a difficult time.

These colourful geometric artworks now line the theatres, corridors and treatment rooms to brighten the hospital walls, creating spaces designed with children in mind. They are visually stimulating and accessible, to intrigue all ages of children and offer something new to discover for returning patients. They activate a sense of play that can be enjoyed whilst moving through the corridors, and keep the children wondering 'what will I spot next?'.

The recovery room is a space for the children to recuperate with their families and carers after surgery, and it is where staff will assess a child's fitness for discharge. We developed an immersive and colourful space surrounded by tall mountains and the deep sea filled with underwater creatures.

The space gives the children the opportunity to use their imagination and build their own forms in our tangram game, whilst staff can assess engagement, co- ordination and mobility while the children play.

We worked with the nurses to ensure that our design approach was tailored to the function of each room. For example, in the procedure room, where patients are often lying on a bed, is an underwater theme, with shoals of fish and giant turtles swimming above. Counting the numerous fish can help nurses to count with the patient as they administer anaesthetics.

Our most recent project at the hospital is with the cystic fibrosis ward. The new environmental graphics are inspired by different types of ball sports, and we have created a cast of characters based on their unique actions: spin, bounce and splat.

The concept is focused on activity and movement, which is expressed through a playful wayfinding system that helps the visitors to navigate the space independently. The wayfinding graphics lead the visitors to the characters' rooms where they find inclusive activities that can be used by staff to support their clinical practice. Gentle challenges on the walls or floors help make the exercises required for treatment fun and part of the wider ward experience. As many of the patients return regularly, we hope that the expressive shapes bringing colour and motion to the space will transform the ward into an environment that engages patients and parents time and time again.

School 21

with Catherine Ramsden

School 21 was initiated because many young people were leaving education under-prepared and lacking the qualifications they would need to realise their potential. The school provides for children aged 4-18 from all backgrounds by partnering with industry and adopting a hands-on approach the school is thriving.

Our work, with a group of eight sixth formers over the autumn term, was focussed on the development of skills in communication, storytelling, critical thinking, consultation, and interviewing. We contributed through a combination of remote learning sessions, presentations, group work and a study tour of the Design Museum, where colleague Sophie Thomas was instrumental in an exhibition about the circular economy. While we were able to share our knowledge and passion for the built environment, we also had much to learn from their fresh ideas and keen insight; this kind of community outreach work is very much a two-way street that is always rewarding and impactful. We are supporting School 21 by providing real world learning opportunities for young people.

> *"While we were able to share our knowledge and passion for the built environment, we also had much to learn from their fresh ideas and keen insight."*

Strand 2 /

GET/SET/ ZERØ

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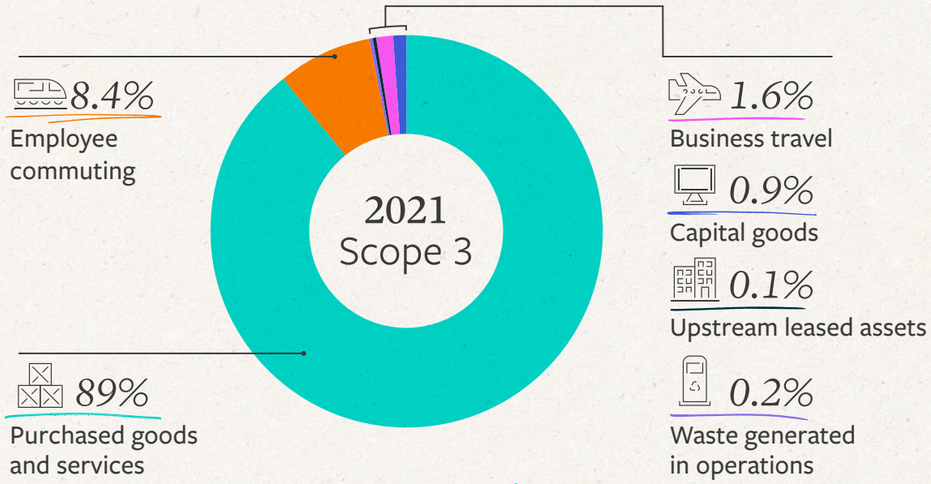
Reporting year 2021

Emissions	Total (tonnes CO_2e)
Scopes 1 & 2	0
Scope 3:	206
Purchased goods & services	183 (89%)
Employee commuting	17.2 (8.4%)
Waste generated in operations	0.3 (0.2%)
Upstream leased assets	0.2 (0.1%)
Business travel	3.2 (1.6%)
Capital goods	1.9 (0.9%)
Total emissions	**206**



Get Set Zero

The Useful Simple Trust is committed to achieving net zero emissions by 2030. Below are the key steps we are taking to reach this goal:

- We have set official science-based targets through the Science Based Targets initiative (SBTi), which were approved in July 2022. Through SBTi we have set a near-term net zero company-wide emissions reduction target to reduce scope 1 and scope 2 GHG emissions by 46% by 2030, from a 2020 baseline.
- We have also joined the Race to Zero initiative. Our targets are recognized on the Science Based Targets initiative (SBTi) website, We Mean Business and the SME Climate Hub.
- We are using supplier engagement to influence our supply chain to measure and set their own science-based targets.
- Through B Corp, we're continuously seeking to minimise our carbon and wider environmental footprint.
- Through calculating our scope 1, 2 and 3 emissions we have been able to identify key areas of impact and develop a carbon management plan to set out a route to net zero.
- As we lease office space we have no direct control of our energy and water consumption. We are working with our landlord to explore ways to monitor and reduce our usage.
- Hybrid working has substantially reduced our scope 3 commuting emissions. We encourage a digital office with minimal printing.
- As part of our scope 3 emissions reduction plan we have identified our top 20 suppliers by spend and have introduced an ethical procurement supplier questionnaire as part of our purchasing process. We are using this to engage with suppliers, to see how they can improve their own carbon performance as well as supporting us in reaching our scope 3 goals.
- We are exploring the most effective way to offset our remaining emissions to reach net zero before our 2030 target.

Our wider impact

We are an SME with approximately 80 employees and one leased office in London. As a professional services company, our carbon footprint is relatively low. Our biggest opportunity to influence carbon savings and environmental benefits is through our design, engineering and sustainability consultancy projects.

We intend to focus our efforts over the coming year on understanding, measuring and reducing the carbon and biodiversity impact of our project work, as well as maximising our wider environmental and social benefit. This is how we can truly unleash our purpose and achieve our mission to be a force for good in the built environment.

Our carbon footprint will be

0 by 2030

"...this is how we can truly unleash our purpose and achieve our mission..."

Some company-wide initiatives we are working on to measure and improve our carbon impact include:

- We have developed an embodied carbon tool and database to allow us to measure the carbon impact of our structural engineering designs. We are now looking at ways to extend this to all the design, engineering and consultancy services that we offer across the Useful Simple Trust, to develop a consistent approach to life cycle analysis and whole life carbon measurement.
- We have committed to becoming a carbon literate organisation in 2023, through The Carbon Literacy Project. This involves identifying staff training needs around carbon literacy and developing a tailored educational programme to build our capacity in this area and maximise the positive impact of our projects.

We are also working with several local authorities and businesses to develop their net zero and decarbonisation strategies, as part of our wider ESG service.

Case study

> *"Our experience, expertise and reputation for providing creative solutions to technical engineering challenges has led to several clients asking us to support their net zero initiatives."*

West Midlands Combined Authority zero carbon homes

We worked with the West Midlands Combined Authority (WMCA) to develop a zero carbon homes evidence base, charter and routemap. Our first step was to determine the region's current development baseline and best practices by reviewing the proposed development pipeline, conducting a policy baseline review and assessing relevant case studies. We created an interactive tool to model what it would take to bridge the current performance gap and deliver zero carbon homes, using the following four scenarios:

1. Baseline Scenario: Modelled after the building regulations, which represents WMCA's current baseline position.

2. Best Practice Scenario: WMCA's current best practice with enhanced fabric improvements and some investments in PVs.

3. Emerging Practice Scenario: Models a transition to heat pumps and heating networks. Unregulated emissions are also addressed.

4. Pioneering Practice Scenario: Models investments in high efficiency heat pumps and the highest insulation standards.

Our baseline analysis concluded that current practices will not allow WMCA to meet its zero carbon homes target, and will result in carbon dioxide emissions of 283,176 tonnes.

Image credit @MawsonKerr Architects

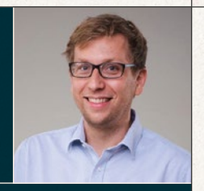
We illustrated how passive technologies and electrically-led (as opposed to gas or other energy source) solutions, complemented by investment in renewable energy, could get them closer to their zero carbon ambitions.

To deliver on these ambitions, we worked with WMCA and a range of regional stakeholders, including developers, local authority members and organisations such as the UK Green Building Council to co-develop a Zero Carbon Homes Charter. The document set the communal aspirations for the region into 12 key principles, that are in the process of being embedded into the combined authorities' single procurement framework.

Based on these ambitions, we developed a Zero Carbon Homes Routemap for WMCA. The routemap recognises that the combined authority plays a critical role in enabling other stakeholders in the region to reduce their carbon emissions. We created an enabling framework for WMCA, looking at key levers it could use to create change in the region. This included policy and strategies, governance and delivery processes, financial and financing mechanisms, upskilling and behaviour change, as well as investment in technology, infrastructure and innovation.

We produced a detailed action plan to help WMCA prioritise its interventions and allocate sufficient funding to deliver its ambitious programme of work. Following the publication of the routemap, WMCA has already started to implement some of its key recommendations, such as investing in construction hubs, embedding sustainable design principles within its procurement framework, and working with key developers and supply chains on decarbonising their processes.

Low carbon concrete



with Pete Winslow

The construction innovation team at Expedition Engineering is currently working with several clients to support their journeys to net zero. For many infrastructure organisations, their capital investments are their biggest source of carbon. Concrete is often one of the largest contributors, with cement causing 8% of all global carbon emissions (IEA 2019).

As the innovation partner for HS2's innovation team we were tasked with developing a flagship low carbon concrete programme. The programme was to build on, and accelerate the implementation of, our previous work with the Infrastructure Industry Innovation Partnership (i3P) delivering a 'Tiger Team' research project investigating the most promising low carbon concretes, and developing a methodology for their adoption.

HS2 has set challenging carbon emissions targets of a 50% reduction by 2030 and net zero by 2035. Two main approaches are needed to achieve this ambition: reducing concrete use and reducing the carbon intensity of concrete.

The low carbon concrete programme is targeting the second of these with the goal of removing 1MtCO_2e. The programme recognises that there are two critical challenges to achieving this significant reduction. Firstly, the technologies and materials for reducing the carbon intensity are largely new, not available at scale or subject to uncertainty in supply. Secondly, to meet the emissions targets the low carbon alternatives need to be adopted at scale and quickly across the whole supply chain.

The programme will establish a systematic process to focus and test trials and pilots on the HS2 goals which it achieves by using the latest innovation management techniques of resolving key risks and assumptions first.

Strand 3 |

MORE〉 WITH〈LESS

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20%

of material can be saved through good design

Over

2,000t

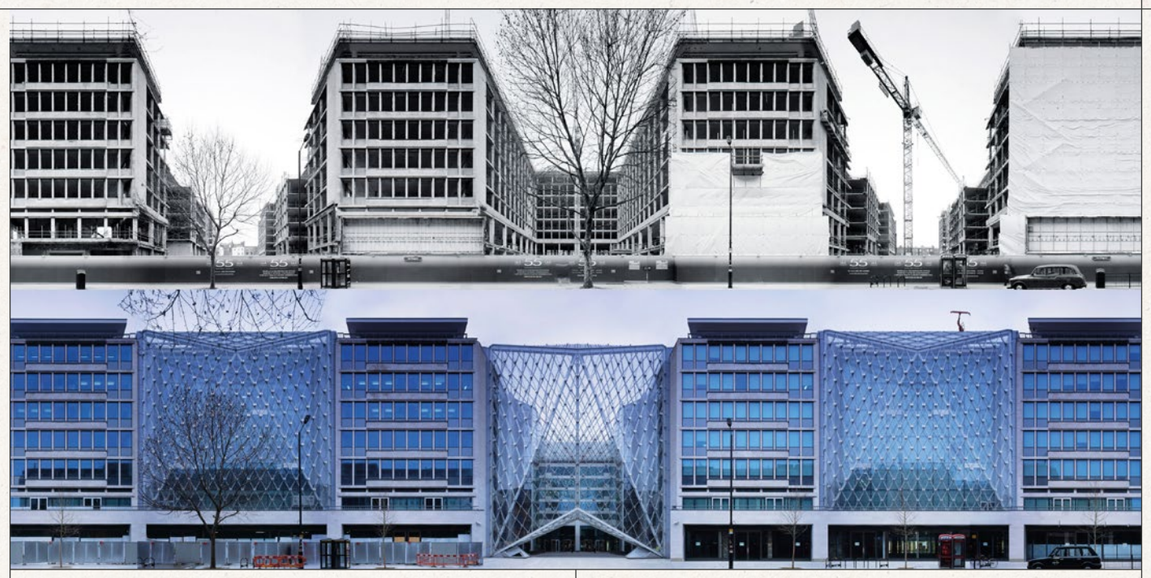
of embodied carbon saved

70%

of original structure retained at Baker Street HQ

35,000t

of concrete structure saved from demolition through reuse



"At the Useful Simple Trust, we delight in creating more value with less material. This means designing out waste and inefficiency."

More with less

The construction sector is the greatest consumer of resources in the world; it also generates the most waste. In 2001, the UK sent over six million tonnes of materials to landfill. Meanwhile, global geopolitical risks are pushing the cost of virgin materials to record highs. At the Useful Simple Trust, we delight in creating more value with less material. This means designing out waste and inefficiency, as part of wider productivity improvements. We value our existing buildings and components deeply, and seek creative opportunities for reuse that maintain their highest value within the supply chain.

Our efficiency impact is felt through our projects, our educational work, and our strategic involvement with professional institutions. An example is our adaptive reuse of 55 Baker Street, preserving 35,000 tonnes of embodied carbon of a large 60 year old building structure, later used as part of the IStructE's call to climate action film. We also designed the timber engineering for the HQ of the World Wildlife Fund, using an inherently low carbon material as an alternative to more conventional steel and concrete.

In 2010, we presented a series of lectures on resource reduction called Enough is Enough. This was followed by our instigation and convening of the Get It Right Initiative, where we worked with the Institution of Civil Engineers and 30 major contractors and clients to demonstrate how up to 20% of construction material is wasted, and to map out remedies. In 2016-18 we chaired the industrial steering group of the MEICON research project at Cambridge University, which showed how structural engineers could remove at least 20% of material and carbon which was being wasted in the design process.

Case study

Image credit @Wilkinson Eyre

Saving on Old Oak Common Station

Based on our reputation for creative engineering design, Expedition partnered with WSP's structural engineering team to bring a high quality and innovative approach to the design of HS2's Old Oak Common Station. As part of an integrated design team, we made significant design contributions across all aspects of the 850m long station structure, from deep foundations to the soaring roof vaults.

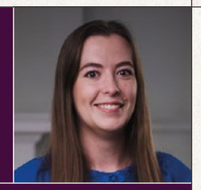
Expedition's approach to material efficiency and design optimisation has been pivotal in making construction material savings on this very large station structure, yielding significant improvements in both sustainability and cost. For example, we worked with the team to develop a business case which allowed for a major roof design optimisation study, with both wind tunnel testing and advanced optimisation work used to generate savings.

To optimise effectively for cost, the team engaged early with steel fabricators, ensuring that the limits and drivers of the fabrication technologies and techniques were understood. The team also recognised that the roof form was not well represented in the wind and snow loading design codes and so we oversaw wind tunnel testing which provided project-specific (and less onerous) loads to feed into the structural design. Our team used advanced numerical methods to streamline the optimisation process, resulting in further savings. This work saved over 1000 tonnes of steel (equivalent to 2000 tonnes of embodied carbon), as well as resulting in a £7m cost saving. We also proposed and undertook a design optimisation of the steel plunge columns, resulting in 450 tonnes of structural steel being removed from the fabricated sections with a 660 tonnes saving of embodied carbon, and a cost saving in excess of £1m.

We also worked closely with the project sustainability team seeking to reduce whole-life impacts of the project, as we are conscious that the majority of the environmental impacts of the station are due to construction of structural elements. Current forecasts indicate that we are on track for a 43% reduction in whole life carbon relative to the Stage 2 design that was inherited by the current design team.

> *Pursuing these opportunities would result in productivity improvements of 10–20%, which represent annual savings of £100–300m.*

Efficient earthworks



with Hazel Needham

In 2020, we were part of a project to carry out a thorough analysis of the earthworks sector, with a focus on productivity improvement. We took a 'Tiger Team' approach which involves exploring in depth the context and the challenges of a sector to identify and assess opportunities for improvement. It relies on an extensive collaboration with a community of practice formed by experts of the sectors including clients, consultants, contractors and suppliers.

The aim of the project was to identify and develop innovations that improve the efficiency in delivery and quality of outcomes associated with earthworks, working collaboratively with the wider infrastructure community to share experiences and learning.

Infrastructure clients spend between £1bn and £1.5bn each year on earthworks. Our study has defined a list of 24 opportunities, such as reduction of plant idling time, use of non-standard materials and a skills development programme to address skills shortages. Pursuing these opportunities would result in productivity improvements of 10–20%, which represent annual savings of £100–300m.

The study has been shared across the industry, and infrastructure clients and contractors are using it to drive their innovation agenda and focus efforts on cost and carbon benefits. We have continued to support them with implementing their top opportunities.

The earthworks Tiger Team project has been the first of a series applying the same successful approach to different asset classes, materials or processes. Made famous by NASA during Apollo 13 mission, the Tiger Team is now having a second life within the UK construction industry.

Strand 4 /

RESTORE + ADAPT

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Restore & adapt

Our biggest contribution to restoring and adapting our built and natural environments is through our sustainable masterplanning projects. We work from the outset to understand resilience risks and how to adapt communities and infrastructure to future climate scenarios. We work to the IPPC RCP 8.5 scenario, often described as the worst case scenario. This precautionary approach ensures that we are building in long term resiliency.

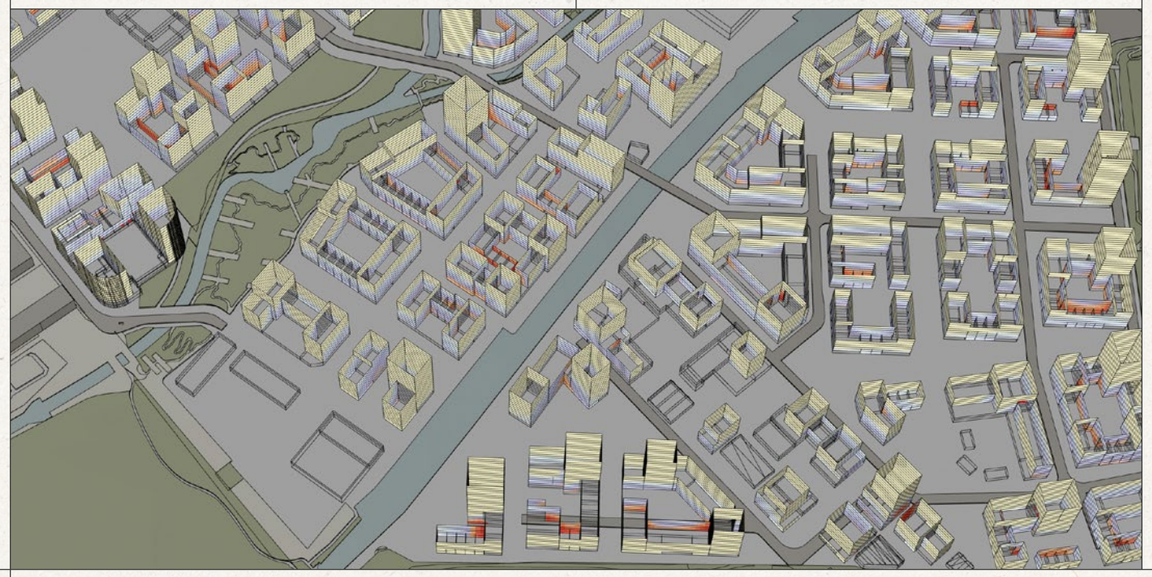
To support our work, we have developed a number of bespoke modelling tools that use climate data from MIT to help us assess the performance of masterplans on human comfort and wellbeing. This is helpful in evidencing why single aspect flats will build in poor thermal comfort as well as the importance of massing and orientation in designing for future climate impacts.

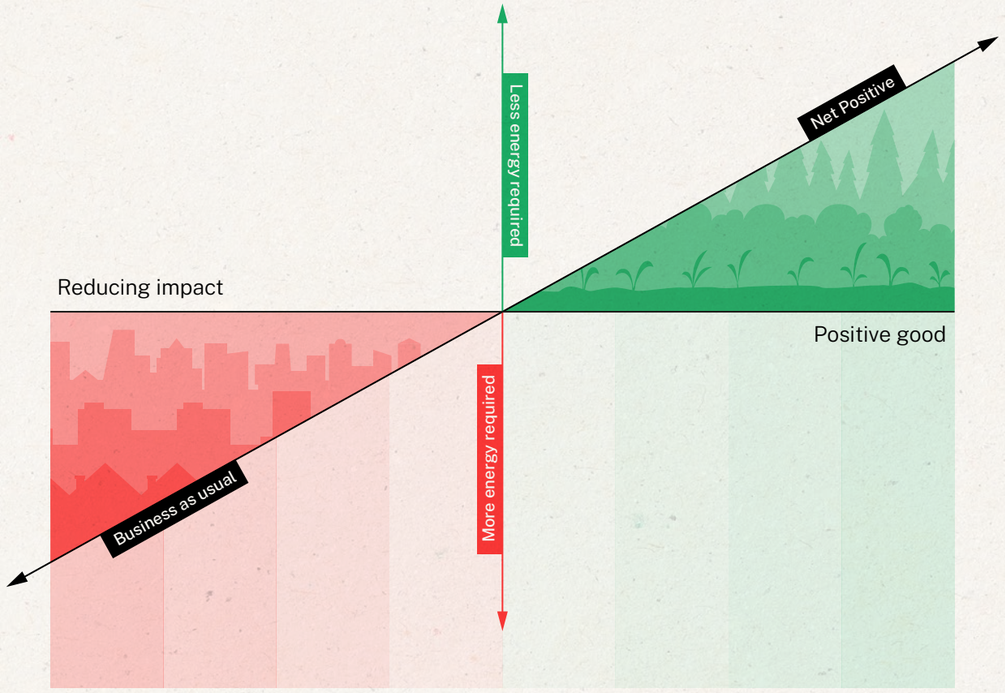
Green infrastructure strategies are an important part of risk mitigation and adaptation approaches. We take a restorative approach, often working with wildlife specialists and collaborating with landscape architects to develop multifunctional landscapes. This approach combines habitat creation, drainage ponds and wetland creation, alongside food growing, to deliver multiple health and wellbeing benefits, as well as urban heat island mitigation and flood risk mitigation.

"We take a restorative approach, often working with wildlife specialists and collaborating with landscape architects to develop multifunctional landscapes."

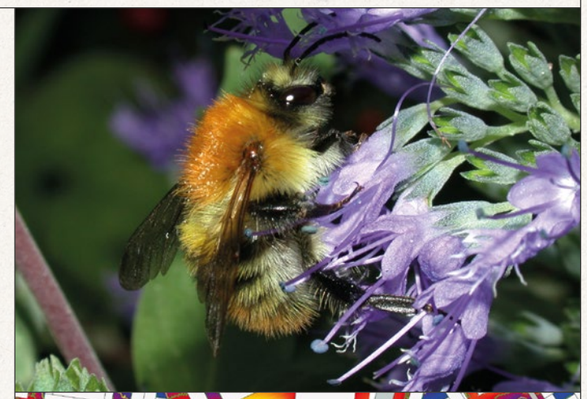
Our historic natural development patterns often mean that we need to reinforce the flood defences of existing communities and developed areas to deal with worsening risk horizons. Wherever possible, we combine hard engineering approaches with ecological enhancements and opportunities for river access.

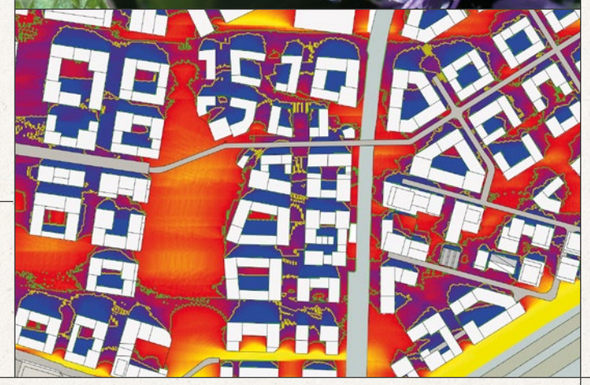
Wherever possible we seek to create a net positive impact, rather than simply mitigating environmental harm.





Targeting
30%
public open space on new masterplans





Case study

Landscape plans and illustration @ Periscope

Lewes flood defence strategy

Working in close coordination with the Environment Agency (EA) we have developed a scheme to replace most of the existing fluvial flood defences along the River Ouse. The existing wall is in very poor condition and not at the right level. It will be replaced with a new flood wall with a crest level of 6.15mAOD (Above Ordnance Datum), designed for a 120 year life, and considering the long term effects of climate change on rainfall intensities and sea level rise.

The flood defence wall will be sensitively integrated with enhancements of ecological habitats. Intertidal shelves will be created on the riverside, terracing restored and new landscape embankments added along the Pells Pool and recreation grounds.

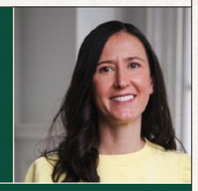
We have closely integrated the design of the new flood defence wall with visual connectivity to the river with a creation of an elevated belvedere deck connected to the proposed footbridge, and with access to the river through provision of a boardwalk and strategic flood gates. The sustainable drainage strategy has been developed in close coordination with the EA and East Sussex County Council.

All stormwater will be discharged to the river, and any connection to the combined sewer system will be removed, reducing pressure on the existing infrastructure and minimising pumping requirements. Stormwater storage will be created in biodiverse landscaped features integrated within the street corridors, and courtyards will be promoted avoiding in-ground storage. This helps to close the water loop with harvesting of rainwater to minimise pressure on local water resources.

Our design locates new flood defences where they will allow views and connection between the recreation ground and the local Pelham Terrace neighbourhood. This also avoids taking down the historic flint wall along the Pells Pool and rebuilding it with a tall wall which would be dominating along the path. Flood gates are sensitively integrated within the existing walls along the Pells Pool and recreation grounds, increasing the current level of flood protection.

We have also incorporated demountable Dutch "dam-in-dam" flood defences to protect the Pelham Terrace neighbourhood from flooding. A parapet wall will provide a passive level of protection, and demountable elements stored within the wall will allow access while raising the protection in the event of a flood warning from the EA. A raised bund at the southern end of Talbot Terrace will also protect the neighbourhood from flooding from the railway.

Velocity and, "100 miles of Wilderness,"



with Judith Sykes

Velocity is a strategic vision that solves some of the most critical issues facing the rural communities, including those in the Oxford to Cambridge Corridor. The response is a collaboration with like-minded professionals from across the industry. Collectively we have experience in early stage project set up and project briefing, masterplanning, infrastructure, planning, architecture, urban design, engineering and consultation.

We were concerned that new infrastructure would bring with it car dominated development and sprawling new communities which were unsustainable, unwelcome and with significant impact on the landscape. At the same time, existing communities are struggling to thrive, facing challenges with an ageing population, loss of social infrastructure and lack of affordable housing.

> *"...we wanted to show an approach which puts back more than it takes away."*

Our response was to develop a series of compact settlements integrated with existing communities and linked together and to new rail infrastructure by a safe and inclusive cycling network. It's a huge privilege to develop in rural communities and we wanted to show an approach which puts back more than it takes away.

We also worked with the Wildlife Trusts on the concept for '100 Miles of Wilderness', which illustrated the importance of creating a green infrastructure strategy to sit alongside the rail and road projects. The proposal links together nature recovery networks and blue corridors to demonstrate how development can also deliver a resilient landscape for the corridor.

Where next?

This impact report is a milestone on a journey we started a long time ago. We have always been a purpose-driven organisation with a mission to do good in the built environment.

Joining B Corp has forced us to reflect on our business practices, which has prompted us to think more about how we measure and report on our wider impact, across all the different sectors and industries within which we operate. Our priority for the next year is to maximise our positive impact by doing more great projects, with great people. We know that to really demonstrate our impact we need data, so collecting more of this is going to be our near term focus. We are committed to becoming more precise in our reporting, as we transition towards our net zero carbon goals. We all have a role to play, but we also understand that our sum is greater than our individual parts so we will be looking at how the UST community can mobilise our collective capabilities and be a force for good in the built environment. We are excited for what our future holds.

Our five key commitments for 2023 and beyond

1. Recertify as a B Corp, by improving our B Corp Impact Assessment score by at least 10%, ensuring that we continue to grow as a responsible and ethical business.
2. Launch and embed our carbon measurement tool so that we can confidently measure and report on project-related emissions – and use it!
3. Develop an approach to offsetting and 'insetting' our scope 3 emissions.
4. Become a certified Carbon Literate Organisation who have the skills and knowledge to be a truly powerful force in the face of climate change and biodiversity loss.
5. Actively seek out projects and collaborations that have the greatest positive benefit to society and the environment.

The Useful Simple Trust family is:
Expedition Engineering, Thomas.Matthews,
Useful Projects & Useful Studio.

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